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17	(AAAS)	(2061) 7.1.2

18	(C&SS)	8.1.2
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39	(TIMSS 2007)	23.1.2
39		24.1.2
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41	(TIMSS)	26.1.2
41	(TIMSS 2007)	27.1.2
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58		3.2.2

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## **ABSTRACT**

### **An Analysis of the Content of Grade Eight Science Book in the Sultanate of Oman for the Requirements of the (TIMSS) Project**

**Huda saif Harith Al-Kharousi**

**Mu'tah University, 2010**

This study aimed to find out the extent to which the content of grade eight science book contains of the requirements of the (TIMSS) Project. This study represents the grade eight science book in the Sultanate of Oman for the academic year 2009/2010.

To achieve the objective of this study, it was acquainted with the reports issued by the The International Association for the Evaluation of Educational Achievement (IEA) and then translating them and make sure of the credibility of the translation by comparing it with the Arabic Version of the Arabic Regional Office in the development programmed of the U.N.

And as a result of these requirements, a card for analyzing the content of grade eight science book was prepared and making sure of its veracity by presented it to some specialized judges and the stability coefficient was calculated to analyze one unit of the intended book. The unit was chosen randomly to be analyzed by two analyses and a researcher. (0.94) was the stability coefficient found by all of them after applying "Holisty" equation. The data was analyzed statistically by using Frequency and percentage. And findings are as follows: The book contains different results of the content dimension, whereas it includes (37.8%) for the biology part, (12.7%) for the chemistry part, (41.3%) for the physics part and (8.1%) for the geology part.

As a result of these findings, the study recommends necessity to take into consideration the (TIMSS) Project requirements while developing the curricula of science books for basic education. The study suggests as well implementing number of similar studies for science books for the other grades.

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(Programs

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2008).

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(Alexandra, 1997)  
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& Erberber, 2008).

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.Garden, 2001)

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(United Nations

(Science Foundation (NSF)

Development Programme)

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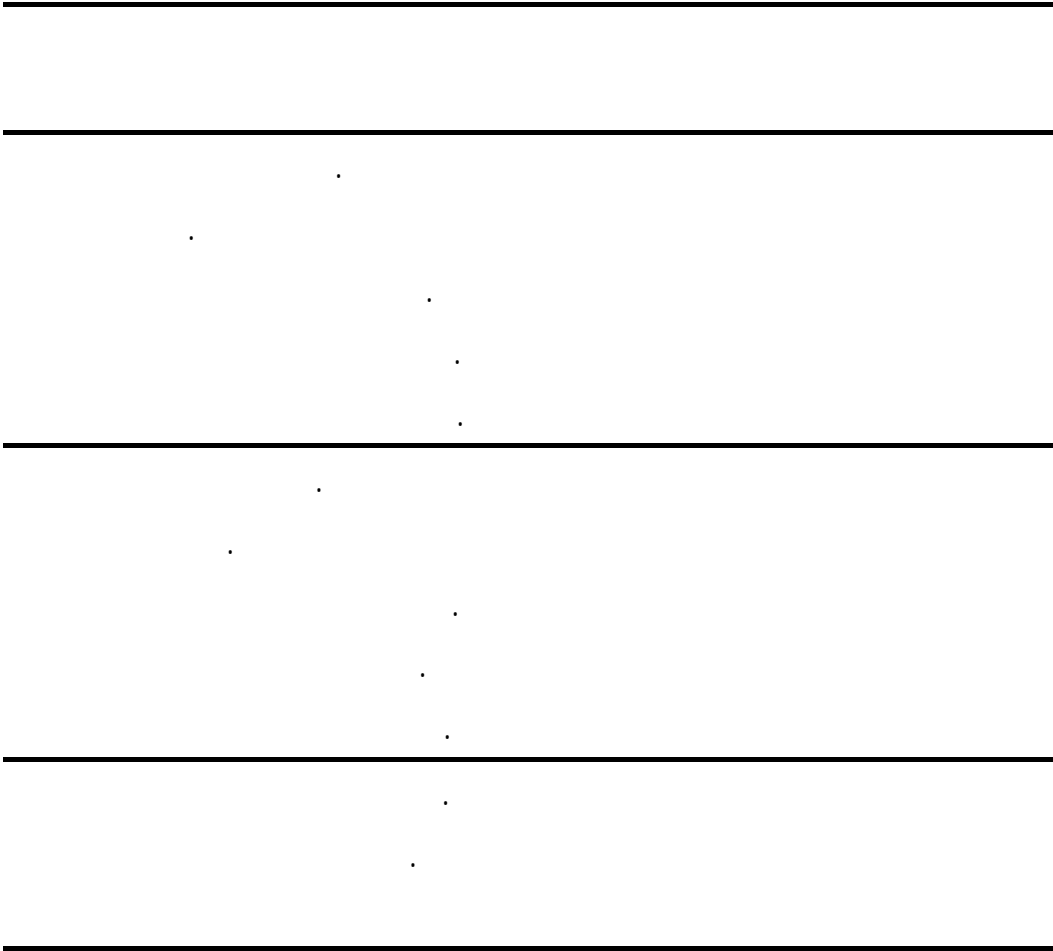
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34	18	16	32	10	22
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2008; TIMSS National Research Center,. 2007).

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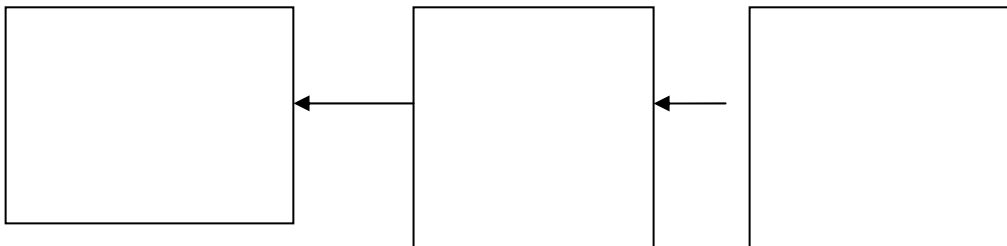
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(Robitaille, Lie, Garden, Angell, Mullis, Martin, Foy, Arora, 2006).

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  - .(Analyzing and interpreting Data) -4
  - (Drawing conclusions and developing -5 explanations).

(Mullis & etc, 2005)

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	.(Physics )	(3)
	.(Earth Science )	(4)
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	.(Applying)	-2
	.(Reasoning )	-3
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161	12
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:	(Recall / Recognize)	/	(1
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:		(Define)	(2
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:		(Describe)	(3
:	(Illustrate with Examples)		(4
			-
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	(Use Tools and Procedures)		(5
			:
		<b>:(Applying)</b>	<b>(2)</b>
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:	(Compare/ Contrast/ Classify )	/	(1
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.	:	(Use Models)	(2
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:	( Interpret Information)		(4
:	(Find Solutions)		(5
.	:	(Explain )	(6
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		<b>:(Reasoning)</b>	<b>(3)</b>
:	(Analyze/ Solve Problems)	/	(1
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: (Integrate / Synthesize) (2

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: (Draw Conclusions) / (5

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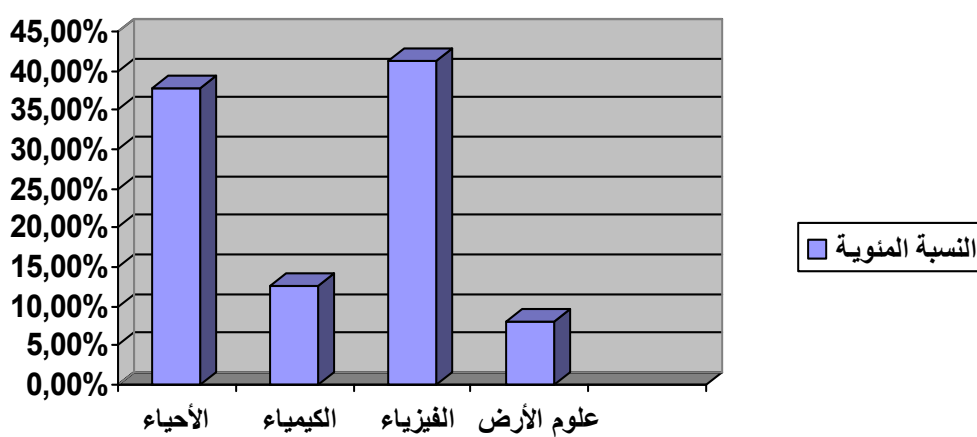
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	%2.7	7	-4
	%3.1	8	-5
	%6.2	16	-6
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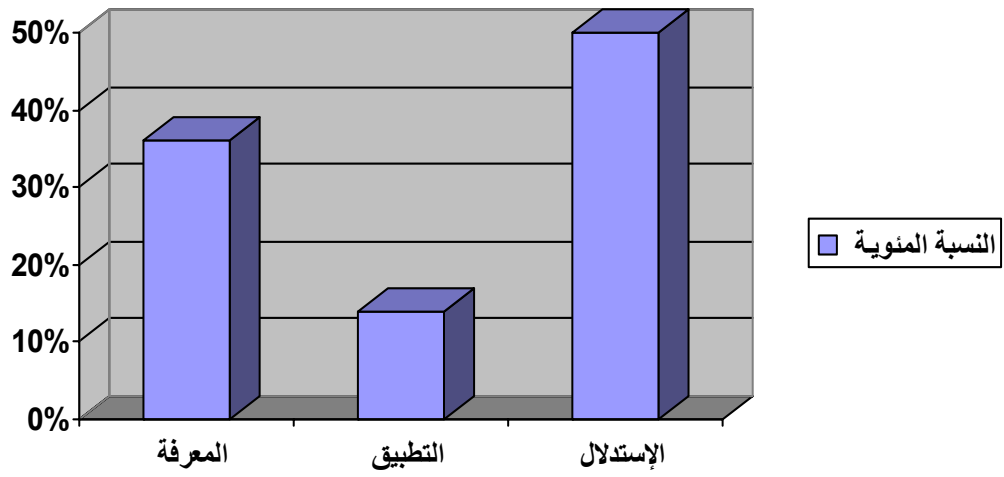
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561	Chinese Taipei	.2
554	Japan	.3
553	Korea	.4
542	England	.5
539	Hungary	.6
539	Czech Republic	.7
538	Slovenia	.8
530	Hong Kong SAR	.9
530	Russian Federation	.10
520	United States	.11
519	Lithuania	.12
515	Australia	.13
511	Sweden	.14
496	Scotland	.15
495	Italy	.16
488	Armenia	.17
487	Norway	.18
485	Ukraine	.19
482	Jordan	.20
471	Malaysia	.21

471	Thailand	.22
470	Serbia	.23
470	Bulgaria	.24
468	Israel	.25
467	Bahrain	.26
466	Bosnia and Herzegovina	.27
462	Romania	.28
459	Iran	.29
457	Malta	.30
454	Turkey	.31
452	Syrian Arab Republic	.32
452	Cyprus	.33
445	Tunisia	.34
427	Indonesia	.35
<b>423</b>	<b>Oman</b>	<b>.36</b>
421	Georgia	.37
418	Kuwait	.38
417	Colombia	.39
414	Lebanon	.40
408	Egypt	.41
408	Algeria	.42
404	Palestinian Nat'l Auth.	.43
403	Saudi Arabia	.44
387	El Salvador	.45
355	Botswana	.46

319	Qatar	.47
303	Ghana	.48
402	Morocco	.49
	<b>Benchmarking Participants</b>	.50
556	Massachusetts	.51
539	Minnesota, US	.52
526	Ontario, Canada	.53
526	British Columbia, Canada	.54
507	Quebec, Canada	.55
498	Basque Country, Spain	.56
489	Dubai, UAE	.57

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## قائمة المحتويات

الصفحة

الموضوع

٥	قائمة المحتويات
١١	تقديم
١٢	المقدمة

١٦

### الوحدة الأولى : من الخلية إلى أجهزة جسم الإنسان

#### From a Cell to Human Body Systems



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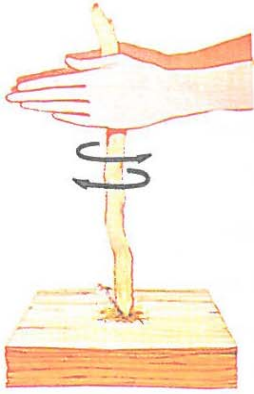
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## الوحدة الثانية : الحرارة

## Heat



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- ٨٨ ..... استكشاف ( ١ ) اكتشاف الفرق
- ٩٣ ..... **التوصيل والعزل الحراري**
- ٩٣ ..... استكشاف ( ٢ ) سخن واكتشف
- ٩٧ ..... **طرق انتقال الطاقة الحرارية**
- ٩٨ ..... استكشاف ( ٣ ) التوصيل الحراري
- ٩٩ ..... استكشاف ( ٤ ) الحمل الحراري
- ١٠١ ..... استكشاف ( ٥ ) الإشعاع
- ١٠٤ ..... **تأثير الحرارة على المواد**
- ١٠٦ ..... استكشاف ( ٦ ) مفاجأة حرارية
- ١٠٨ ..... استكشاف ( ٧ ) أين أختفت الطاقة الحرارية ؟



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## الفصل الرابع : استخدام الطاقة الحرارية

- ١١٢ ..... **إنتاج الحرارة**
- ١١٣ ..... استكشاف ( ١ ) البحث عن طرق طبيعية لإنتاج الحرارة
- ١١٤ ..... استكشاف ( ٢ ) تحولات الطاقة الشمسية
- ١١٥ ..... استكشاف ( ٣ ) أجهزة حساسة للتغير في درجة الحرارة
- ١١٧ ..... استكشاف ( ٤ ) وصف عمل بعض الأجهزة الكهربائية
- ١١٨ ..... **الثقافة الحرارية في الماضي**
- ١١٩ ..... استكشاف ( ٥ ) البحث في الماضي
- ١٢٠ ..... **الآثار البيئية الناتجة عن استخدام الطاقة الحرارية**
- ١٢١ ..... **مشروع الوحدة : طبخ الأطعمة باستخدام ضوء الشمس**
- ١٢٤ ..... **إرتباط العلوم بالهن**
- ١٢٥ ..... **أسئلة المراجعة**



### ١٣٢ الفصل الخامس : المواد الكيميائية وتأثيرها في البيئة

- ١٣٢ ما المواد الكيميائية ؟
- ١٣٦ استكشاف ( ١ ) تصنيف المواد الكيميائية
- ١٣٧ المواد الكيميائية في كل مكان
- ١٣٩ المعادن في أجسامنا
- ١٤٠ ماذا يحدث إذا لم تتوازن المواد الكيميائية في البيئة
- ١٤١ الأسمدة الصناعية
- ١٤٣ استكشاف ( ٢ ) أثر تركيز السماد على نمو النبات
- ١٤٥ مبيدات الآفات الزراعية
- ١٤٧ استكشاف ( ٣ ) تراكم مادة د . د . ت في السلسلة الغذائية



### ١٥٠ الفصل السادس : الأحماض والقواعد

- ١٥٠ الأحماض
- ١٥١ القواعد
- ١٥١ كواشف الأحماض والقواعد
- ١٥٢ استكشاف ( ١ ) حمضي أم قاعدي
- ١٥٤ تركيز المحاليل الحمضية والقاعدية
- ١٥٦ مقياس الرقم الهيدروجيني
- ١٥٧ استكشاف ( ٢ ) حموضة التربة
- ١٦٠ التعادل
- ١٦١ استكشاف ( ٣ ) تعادل حمض مع قاعدة
- ١٦٣ المطر الحمضي
- ١٦٤ كيف يتكون المطر الحمضي
- ١٦٤ استكشاف ( ٤ ) علاقة غاز ثنائي أكسيد الكربون بتكوين المطر الحمضي
- مشروع الوحدة : دراسة حول أثر المواد الكيميائية المنزلية
- ١٦٨ على نمو النبات
- ١٧١ ارتباط العلوم بالمهن
- ١٧٢ أسئلة المراجعة

## Waves and Their Applications



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## الفصل السابع : الموجات

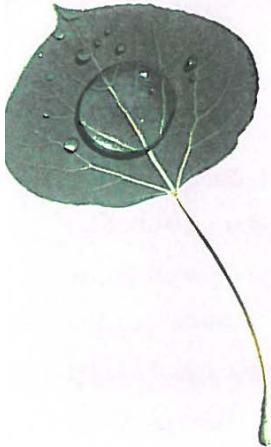
- ١٧٩ ..... **طبيعة الموجات**
- ١٨٢ ..... **خصائص الموجات**
- ١٨٦ ..... استكشاف ( ١ ) تكوين موجات عبر سلك زبركي
- ١٨٧ ..... استكشاف ( ٢ ) تأثير التردد على الطول الموجي
- ١٨٩ ..... **حركة أمواج البحر**
- ١٩١ ..... استكشاف ( ٣ ) حركة الموجة
- ١٩٤ ..... استكشاف ( ٤ ) اصطدام الموجات بحاجز مستقيم
- ١٩٧ ..... استكشاف ( ٥ ) حركة الموجات عبر وسطين مختلفين
- ١٩٨ ..... استكشاف ( ٦ ) تغير شكل الموجة



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## الفصل الثامن : الصوت والضوء

- ١٩٩ ..... **الصوت**
- ١٩٩ ..... استكشاف ( ١ ) إصدار الصوت
- ٢٠٠ ..... **خصائص الصوت**
- ٢٠٣ ..... استكشاف ( ٢ ) صمم استكشاف لإيجاد سرعة الصوت في الهواء
- ٢٠٣ ..... استكشاف ( ٣ ) سرعة الصوت (إثرائي)
- ٢٠٧ ..... استكشاف ( ٤ ) انعكاس موجات الصوت
- ٢١٢ ..... **تقانة الصوت**
- ٢١٥ ..... **خصائص الضوء**
- ٢١٦ ..... استكشاف ( ٥ ) سطوع الضوء
- ٢١٨ ..... استكشاف ( ٦ ) آلة التصوير ذات الثقب
- ٢١٩ ..... **موجات الطيف الكهرومغناطيسي**
- ٢٢١ ..... **المرآيا والانعكاس**
- ٢٢٣ ..... استكشاف ( ٧ ) عندما ينعكس الضوء
- ٢٢٥ ..... **الانكسار والعدسات**
- ٢٢٧ ..... استكشاف ( ٨ ) تكون الصور في العدسات
- ٢٢٩ ..... استكشاف ( ٩ ) الرؤية تجعلك تصدق
- ٢٣٢ ..... **تقانة الضوء**
- ٢٣٤ ..... **مشروع الوحدة : اصنع نموذج جهاز تلسكوب كاسر للضوء**
- ٢٣٦ ..... **أسئلة المراجعة**





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## الفصل التاسع : مياه المحيطات

- خصائص مياه المحيطات**
- ٢٤٥ استكشاف ( ١ ) مقارنة المياه المالحة بالمياه العذبة
- ٢٤٥ استكشاف ( ٢ ) مقارنة الطفوية (إثرائي)
- ٢٤٨ استكشاف ( ٣ ) سبب ملوحة المحيط
- ٢٥٢ استكشاف ( ٤ ) الغازات المذابة
- ٢٥٤ استكشاف ( ٥ ) ماذا يوجد هناك في قاع المحيط ؟
- ٢٥٥ استكشاف ( ٦ ) الأمواج والشواطئ
- ٢٥٨ استكشاف ( ٧ ) تقصي ظاهرة المد
- ٢٦٢ استكشاف ( ٨ ) الرياح والتيارات



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## الفصل العاشر : الكائنات الحية في البيئة البحرية

- التكيف من أجل الحياة البحرية**
- ٢٦٦ استكشاف ( ١ ) هل هي حركة حكيمة ؟
- ٢٦٧ استكشاف ( ٢ ) تكيف النباتات
- ٢٦٩ **السلطة الغذائية البحرية**
- ٢٧٠ **المناطق الحيوية البحرية**
- ٢٧٣ **كيف يؤثر الإنسان في بيئته البحرية**
- ٢٧٥ استكشاف ( ٣ ) تأثير الإنسان في البيئة البحرية
- ٢٧٦ استكشاف ( ٤ ) إجراء إحصائية حول الترشيد والإسراف في استخدام الماء
- ٢٧٨ **مشروع الوحدة : الماء دم الأرض**
- ٢٨٢ **أسئلة المراجعة**
- ٢٨٥



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		: (Knowing ) :	
		.Recall / Recognize	
		.Define	
		.Describe	
		.Illustrate with Examples	
		.Use Tools and Procedures	
		: (Applying)	
		Compare/ .Contrast/ Classify	
		.Use Models	
		.Relate	
		.Interpret Information	
		.Find Solutions	
		.Explain	
		: (Reasoning )	
		Analyze/ / .Solve Problems	
		.Integrate / Synthesize	
		Hypothesize/ / .Predict	
		.Design / Plan	
		Draw .Conclusions	
		.Generalize	
		.Evaluate	
		.Justify	

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%0.0	19		-6
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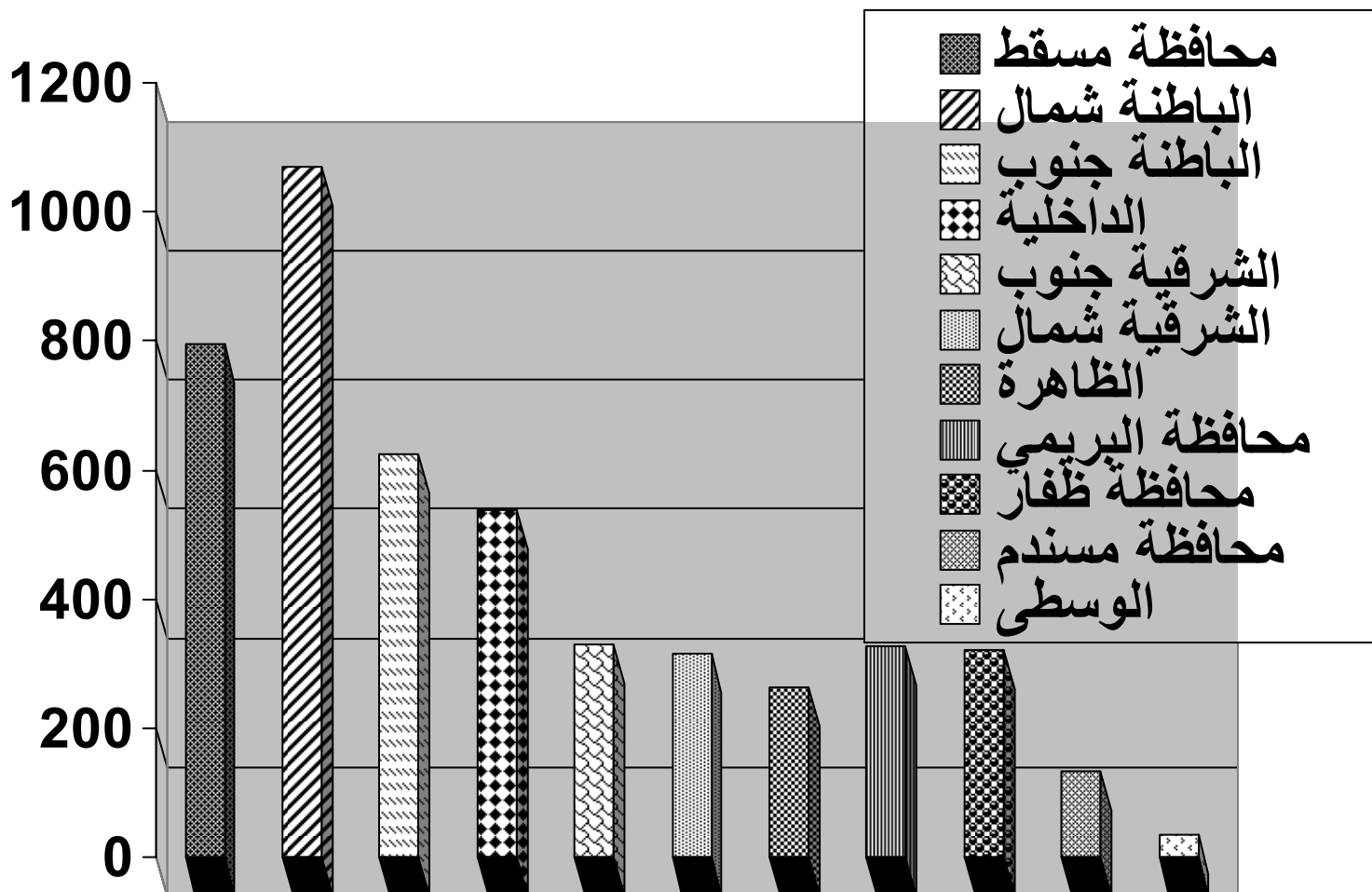
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**(TIMSS 2007)**



(TIMSS 2007 )